



Model Railroading

Railway Vehicle Modelling Standards

Published: 27/06/2015

Author: Andrew Martin

Change control

Version	Author	Reason for Change	Change Date
0.9	Andrew Martin	First version	20/05/2008
1.0	Andrew Martin	Amended formatting and wording multiple sections. Published to Essendon Model Railway Group management committee.	24/08/2009
1.1	Andrew Martin	Amendment to formatting and presentation per the EMRG committee recommendations	07/09/2009
1.2	Andrew Martin	Re-write on several sections and additional comments to make this more generic for others interested in using this document at their club. Added table of content.	03/03/2010
2.0	Andrew Martin	Updated head and footer, checked contents and updated as needed. Re-wrote several sections for grammar and other updates to reflect current modelling standards. Changed base document format to *.DOCX and published to PDF.	27/06/2015

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1 Overview

Standards are important for the day-to-day operation of any endeavour. Within a model railway club a set of easily attained, but commonly applied standards, give all members a consistent standard of presentation to work toward when models and layouts are to be presented to the paying public. Readers should note that while this document primarily addresses clubs and club members the modelling standards required for successful exhibition display apply equally to people who wish to model to a set standard for their own ends, whether displayed at exhibitions or not.

2 Purpose of the document

This document addresses the ad-hoc nature of modelling standards within model railway clubs. The document provides a ready-made system for consideration to the management group of your model railway club for discussion.

3 Why a suggested standard?

The suggested standard set out in this document use as a base the 1982 Railroad Model Craftsman article by Dennis Storzek entitled: Five Boxcar Improvements (pp 84). The suggested standard ensures that the presentation and interoperability of models is of a standard that promotes fault free running at exhibitions.

4 Understanding requirements and recommendations

Many ready-to-run models equal if not surpass the minimum standards suggested below. Thus the standards make sure that members can take part without any undue cost imposition. This is vitally important for new members who upon entering the hobby may not have the skills, tools or the want to change their purchases. It should be understood that no model need exceed the bronze level to be acceptable for running on the club's layout(s) during running nights or at exhibitions. There is no need that the model builder or owner must meet silver or gold standards unless agreed to by the members, modellers or layout owners.

5 The standards framework

The standards framework takes a two-pronged approach; it is made up of the following components:

- 1) Requirements (Bronze standard), and
- 2) Recommendations (Silver and Gold standards).

5.1 Requirements

- Are mandatory,
- Set out minimum modelling standards endorsed by the club's managing committee,
- Set out minimum standards for all members wishing to run models on running nights, or for exhibition use on 'club' owned layouts.

While a requirement is mandatory modellers may at any time exceed a requirement so long as that change does not compromise running night enjoyment or exhibition presentation (the minimum standard).

5.2 Recommendations

- Recommendations are not mandatory
- Build upon the requirements to provide greater accuracy and fidelity of the modelled subject
- Set out additional standards to be achieved by modeller's choosing to follow them
- Must not impact on the requirements set out earlier.

Achieving gold and silver may need tools, accessories and techniques that are new to the club member. These higher standards take a model increasingly beyond the level of fidelity provided by a manufacturer and closer to a true scale representation of a particular vehicle at a set time and date.

6 The Standards

6.1 Bronze Requirements

The following requirements are the minimum level for all models intended for operation and/or display on the club's layout(s).

- 1) Couplers
 - a) Kadee™ or compatible scale couplers,
 - b) Must be physically mounted (screwed, or bolted) to the body of the vehicle,
 - c) Tested with an appropriate coupler gauge for height and clearance, and
 - d) Must look like the prototype.
- 2) Wheel sets
 - a) Must be metal, centred on the axle with no "wobble" in regular use,
 - b) Must be insulated to make sure that no short circuits occur, and
 - c) Must be checked as in gauge using an NMRA, or similar gauge.
- 3) Trucks
 - a) Freight and Passenger stock:
 - i) Must be screw-mounted to the body of the vehicle,
 - ii) Must be mounted to make sure that cars do not "wobble" through the use of simple three-point suspension, tight on A end of car and loose on the B end of the vehicle
- 4) Build
 - a) Must be free of blemishes caused by glue stains, scratches, or other build quality issues caused during the build process
- 5) Finish
 - a) Must be spray painted (can or airbrush) to make sure a of fine presentation finish,
 - b) Must be over coated with a dulling agent (can or airbrush),
 - c) May have light quality weathering applied appropriate to the vehicle's usage (no lading spills where this would not be prototypical for example).

6.2 Silver Recommendations

The Silver Standard recommendations are in addition to those specified in the bronze standard and aim to add a layer of specialisation to the base model. Generally the model should fit within a specific time period, in a state of repair appropriate for the time and should be in a paint scheme of an actual owning railroad.

- 1) Couplers
 - a) Must meet all Bronze Requirements above, and in addition
 - b) Should be fine scale Kadee #58 in your chosen scale
- 2) Wheel sets
 - a) As per all Bronze Requirements above, and in addition
 - b) Should be fine scale profiled (RP25-88 or finer standards)
 - c) Could have resistance paint, or SMD resistors painted on for track circuit detection maximum of 1 per car – mounted on "A" end axle.
- 3) Trucks
 - a) As per all Bronze Requirements above, and
 - b) Should be appropriate for the period being modelled, or for the vehicle being modelled in a particular condition at a particular time. (For example No roller bearing trucks on older models or journal bearings on modern models unless the modeller has photographic research that shows otherwise.)
- 4) Vehicle body
 - a) As per all Bronze Requirements above,
 - b) Should have basic under-body detail to:
 - i) Suggest the modelling of the correct type of brake gear, reservoirs, etc.
 - c) Should have replacement grab irons, stirrups, uncoupling levers and other hardware with after-market parts, wire or staples.
 - d) Should meet the NMRA model weight standard as set out in the recommended practices
- 5) Finish
 - a) As per all Bronze Requirements above,
 - b) Should be prototypical for the period, era and the ownership modelled, and
 - c) Light, quality weathering based on a picture of the type of car or of a similar car in the same class. Fantasy weathering based on research of other similar cars or types of cars is acceptable.

6.3 Gold Recommendations

The Gold Standard recommendations are in addition to those specified in the Silver Recommendations and aim to provide the greatest level of prototype fidelity. Generally the model should be researched and modelled to a known state as shown in photographic images, or according to builders blue-prints for a specific time period and should be in a known paint scheme shown.

- 1) Couplers
 - a) As per all Bronze Requirements and Silver Recommendations above,
 - b) Should be the correct coupler type (e.g. Shelf type couplers on tank cars) for the type of car modelled.
- 2) Wheel sets
 - a) As per all Bronze Requirements and Silver Recommendations above,

- b) Should be scale width tread (after market wheel sets available from Reboxx and others will suffice)
- 3) Trucks
 - a) As per all Bronze Requirements and Silver Recommendations above,
 - b) Should be sprung and equalised (Kadee or other after-market units)
- 4) Vehicle body
 - a) As per all Bronze Requirements and Silver Recommendations above,
 - b) Should show under-body detail that:
 - i) Models the full and correct brake system of the vehicle,
 - ii) Models the rigging, truss rods and any other visible detail to model as true to the prototype vehicle according to available research.
 - c) Should have scale thickness:
 - i) Running boards,
 - ii) Tack boards,
 - iii) Brake wheels,
 - iv) Hand rails, grab irons, and stirrups, and cut levers.
 - d) Should have:
 - i) Etched metal roof walks where available by after-market manufacturers and as appropriate to the time period being modelled.
- 5) Finish
 - a) As per all Bronze Requirements and Silver Recommendations above,
 - b) Paint schemes and detailing of car ends, sides, doors, roof as true to the prototype vehicle according to available research,
 - c) All car lettering, including end lettering where appropriate to be applied. This may include, but is not limited to car data, chalk marks, graffiti, etc. and
 - d) Subtle, quality weathering as per photos of the vehicle being modelled. No fantasy weathering schemes should be applied.

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